

# Comparisons of Job Characteristics

**Focus Occupation:** [First-Line Supervisors of Production and Operating Workers \(51-1011\)](#)

**Associated Occupation:** [Materials Engineers \(17-2131\)](#)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 39

**Focus Occupation:** First-Line Supervisors of Production and Operating Workers (51-1011)

**Associated Occupation:** Materials Engineers (17-2131)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Engineering and Technology	5.7	18.9	8.3	<<	Extensive education and/or training may be required
Chemistry	4.8	15.3	5.0	<<	Extensive education and/or training may be required
Physics	4.3	10.6	3.6	<<	Extensive education and/or training may be required
Design	5.2	7.9	6.5	<	Expanded education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 63

**Focus Occupation:** First-Line Supervisors of Production and Operating Workers (51-1011)

**Associated Occupation:** Materials Engineers (17-2131)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Science	4.5	13.0	3.4	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	12.0	10.7	<	A higher skill level may be required
Operations Analysis	5.0	11.7	7.6	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Abilities

Similarity of Focus Occupation to Associated Occupation: 93

**Focus Occupation: First-Line Supervisors of Production and Operating Workers (51-1011)**

**Associated Occupation: Materials Engineers (17-2131)**

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Oral Expression	12.4	15.3	14.0	0	Current ability level may be sufficient
Problem Sensitivity	11.1	14.7	12.1	<	Some improvement in abilities may be required
Deductive Reasoning	10.6	14.2	11.4	<	Some improvement in abilities may be required
Written Comprehension	11.0	14.2	12.2	<	Some improvement in abilities may be required
Inductive Reasoning	10.2	13.9	10.7	<<	Extensive improvement in abilities may be required
Written Expression	9.8	13.8	11.0	<	Some improvement in abilities may be required
Category Flexibility	9.0	11.5	8.8	<<	Extensive improvement in abilities may be required
Originality	7.6	10.6	9.7	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	10.2	7.1	<<	Extensive improvement in abilities may be required
Number Facility	6.3	9.2	6.2	<<	Extensive improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 75

**Focus Occupation: First-Line Supervisors of Production and Operating Workers (51-1011)**

**Associated Occupation: Materials Engineers (17-2131)**

Work Activities	Exclusivity of Activity
Communicate technical information	4
Coordinate production materials, activities or processes	81
Determine factors affecting production processes	84
Direct and coordinate activities of workers or staff	3
Estimate materials or labor requirements	61
Prepare reports	8
Read blueprints	10
Read technical drawings	7

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 65

**Focus Occupation: First-Line Supervisors of Production and Operating Workers (51-1011)**  
**Associated Occupation: Materials Engineers (17-2131)**

Tools and Technologies	Exclusivity
Business function specific software	1
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Information exchange software	1
Network applications software	1
Safety apparel	4
Vision protection and accessories	3

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.